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FÓRUM SUSTENTABILIDADE & GOVERNANÇA

Sustainability and the role of ecosystem services and biodiversity in the world after Paris 2015

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Sustainability and Governance Forum

Curitiba, Brazil

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Sustainability and Nature

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SDGs: *Post-2015* Development Process

- Rio+20: Open Working Group (OWG) mandated to draft post-2015 development agenda.
- Largest consultation programme in history by UN: 11 thematic consultations; 83 national consultations; door-to-door surveys.
- Online "My World" survey launched for citizens to prioritise the areas they would like to see addressed by SDG's.
- OWG represented 70 countries; submitted 17 suggestions for the SDGs in July 2014.
- Markedly wider and deeper process than the MDGs' formation in 1999/2000.

An effective Bottom-Up approach

Organizations & Committees that contributed to making the SDGs

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

High-level Panel ON the Post-2015 Development Agenda

OWG

ECOSOC
United Nations

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What does the 'Periodic Table' of the *SDGs* look like ?

This huge opportunity for humanity is perhaps also its biggest puzzle…

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A Working Structure for Implementing the SDGs?

Source: Johan Rockstrom & Pavan Sukhdev, EAT Forum 2016

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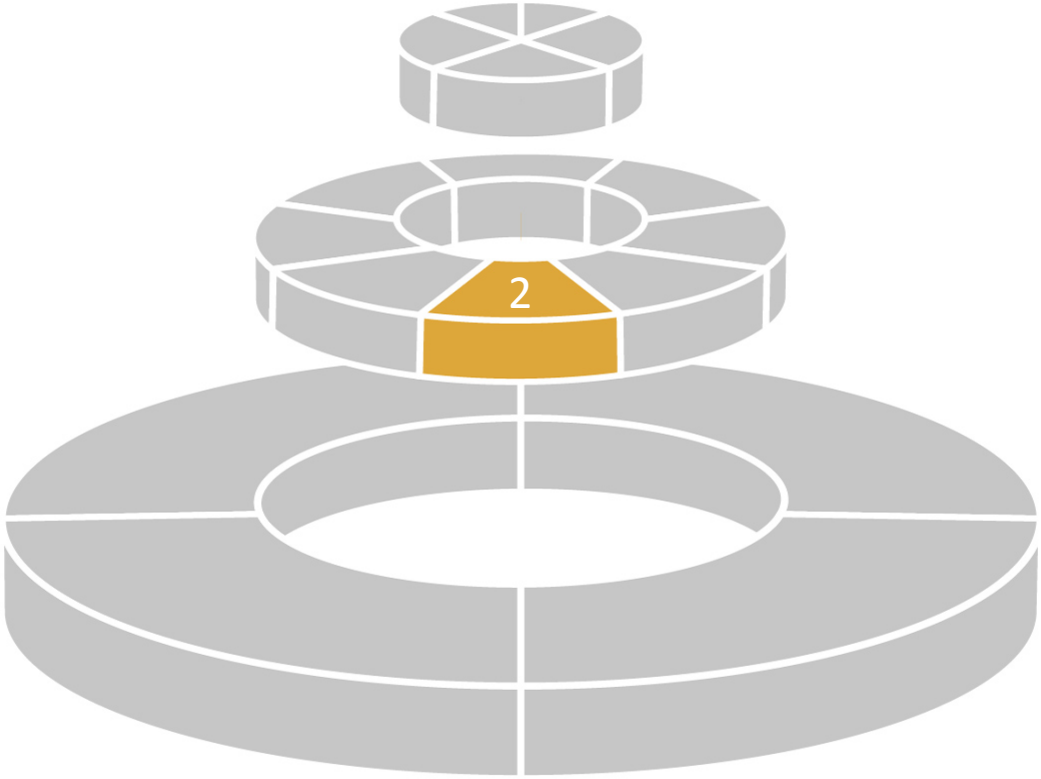
SDG 2 - End hunger, achieve food security and improved nutrition, and promote sustainable agriculture



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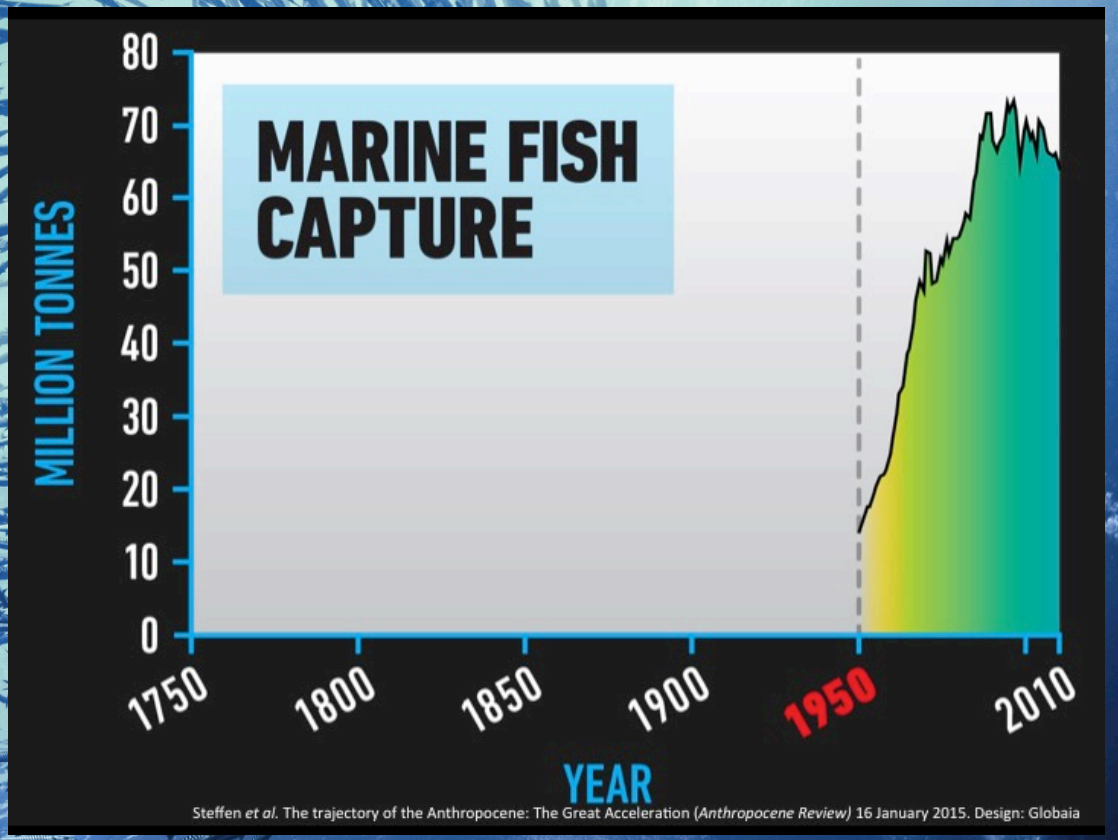
Marine fish capture trajectory



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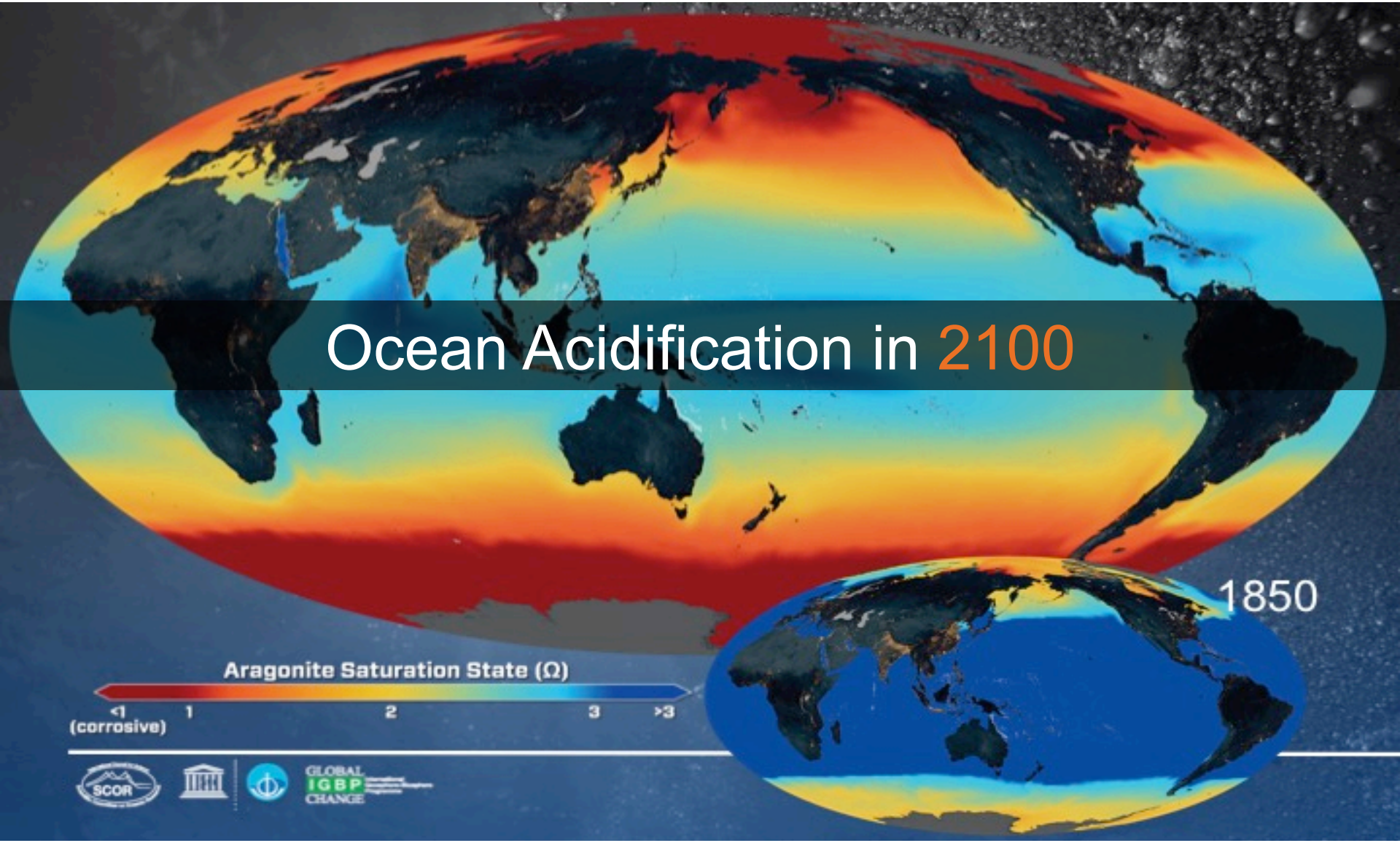
Risk to Marine Food Chains..



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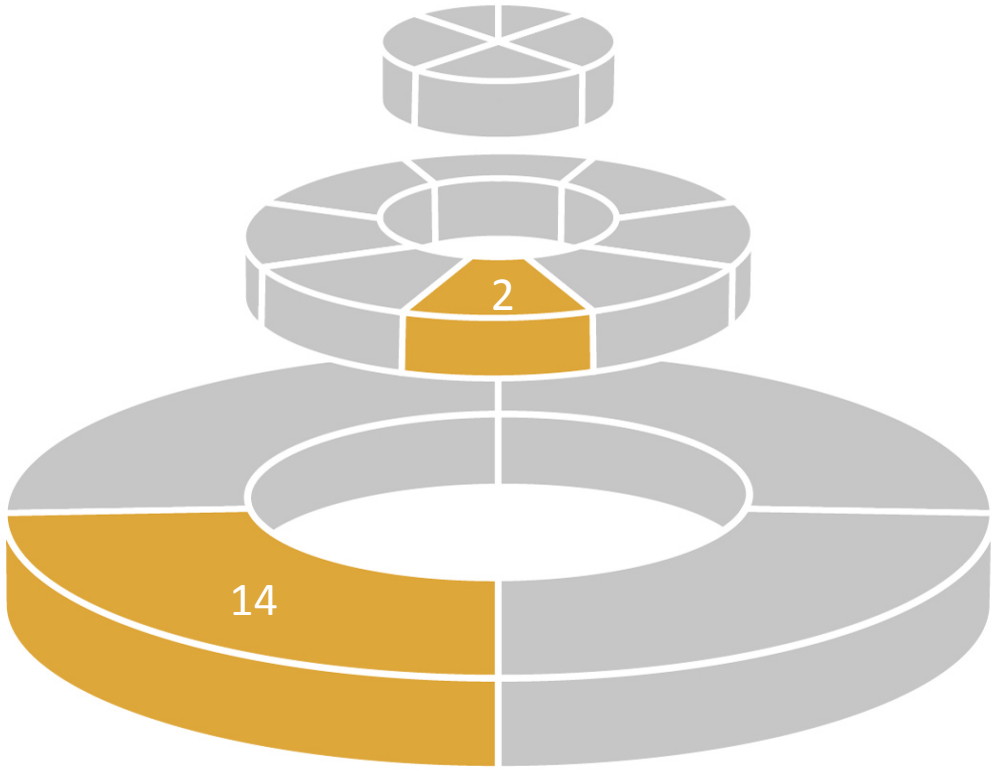
SDG 14 – Conserve & sustainably use the oceans, seas & marine resources for sustainable development



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40%

GLOBAL LAND SURFACE USED FOR FOOD

ADDITIONAL CALORIES NEEDED BY 2050

70%

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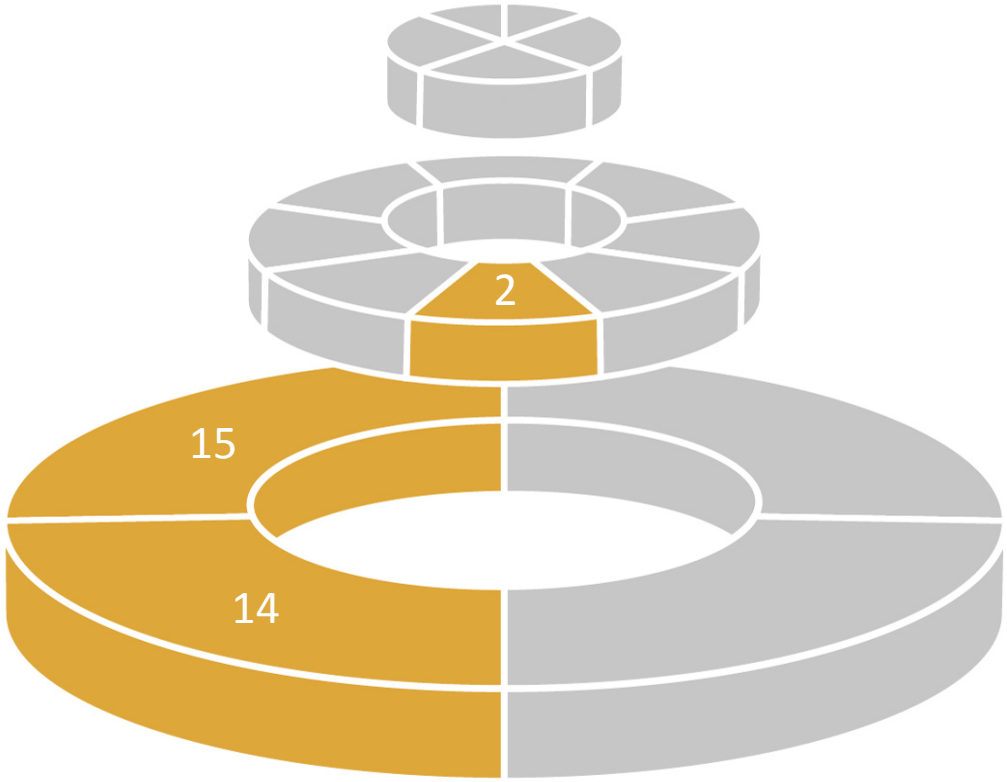
SDG 15 – Protect terrestrial ecosystems



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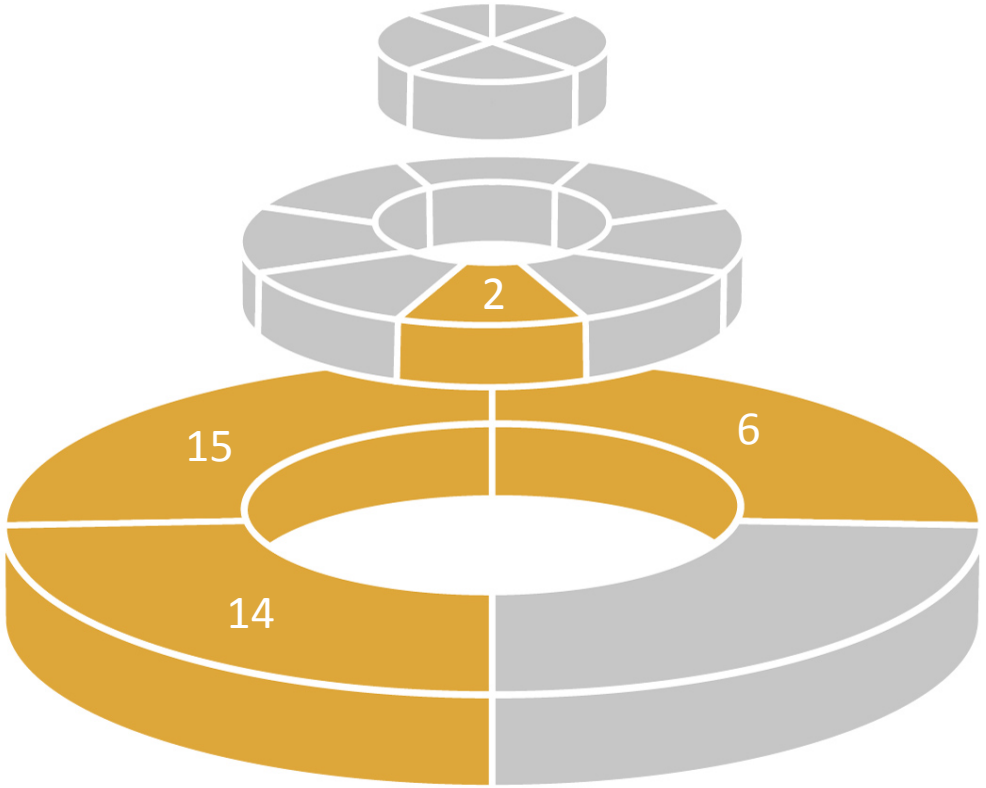
SDG 6 – Ensure availability and sustainable management of water and sanitation for all



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Health, climate change and diets

Springmann, M., Charles, H., Godfray, J., Rayner, M., & Scarborough, P. (2016). Analysis and valuation of the health and climate change co-benefits of dietary change. *PNAS , 113 (15)*.

A dietary shift towards reduced meat consumption could reduce global mortality by 6–10% and food-related greenhouse gas emissions by 29–70% by 2050

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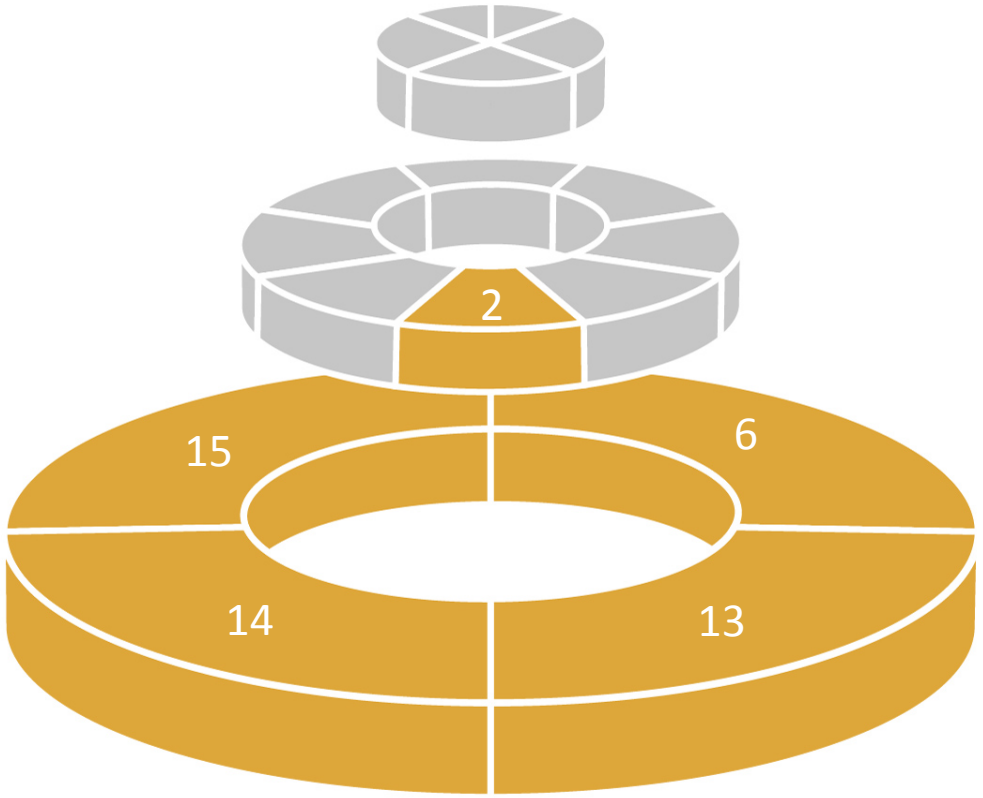
SDG 13 – Take urgent action to combat climate change and its impacts



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Source: Johan Rockstrom & Pavan Sukhdev, EAT Forum 2016

What can corporations do to support the SDGs

Recognise and work towards furthering the “foundational” SDGs.

Measure and manage their impacts and dependencies on *Natural Capital*.

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Natural Capital Protocol

Deep Dive Pilots

Shell
BOSS HUGO BOSS
Coca-Cola
Dow
natura
Nestlé

Pilots

JAGUAR
CPFL ENERGIA
LEGADO DAS ÁGUAS
RESERVA VOTORANTIM
NOVARTIS

- Launched in July 2016 in London.
- *"The purpose of the Protocol is to help businesses integrate their relationship with nature into their strategy and operations."*
- Development led by two consortiums, one led by WBCSD, other by IUCN.
- Brazilian pilots:
  - Natura
  - CPFL Energia
  - Legado das Águas
- Over 50 companies tested the protocol from Oct 2015 to Feb 2016.

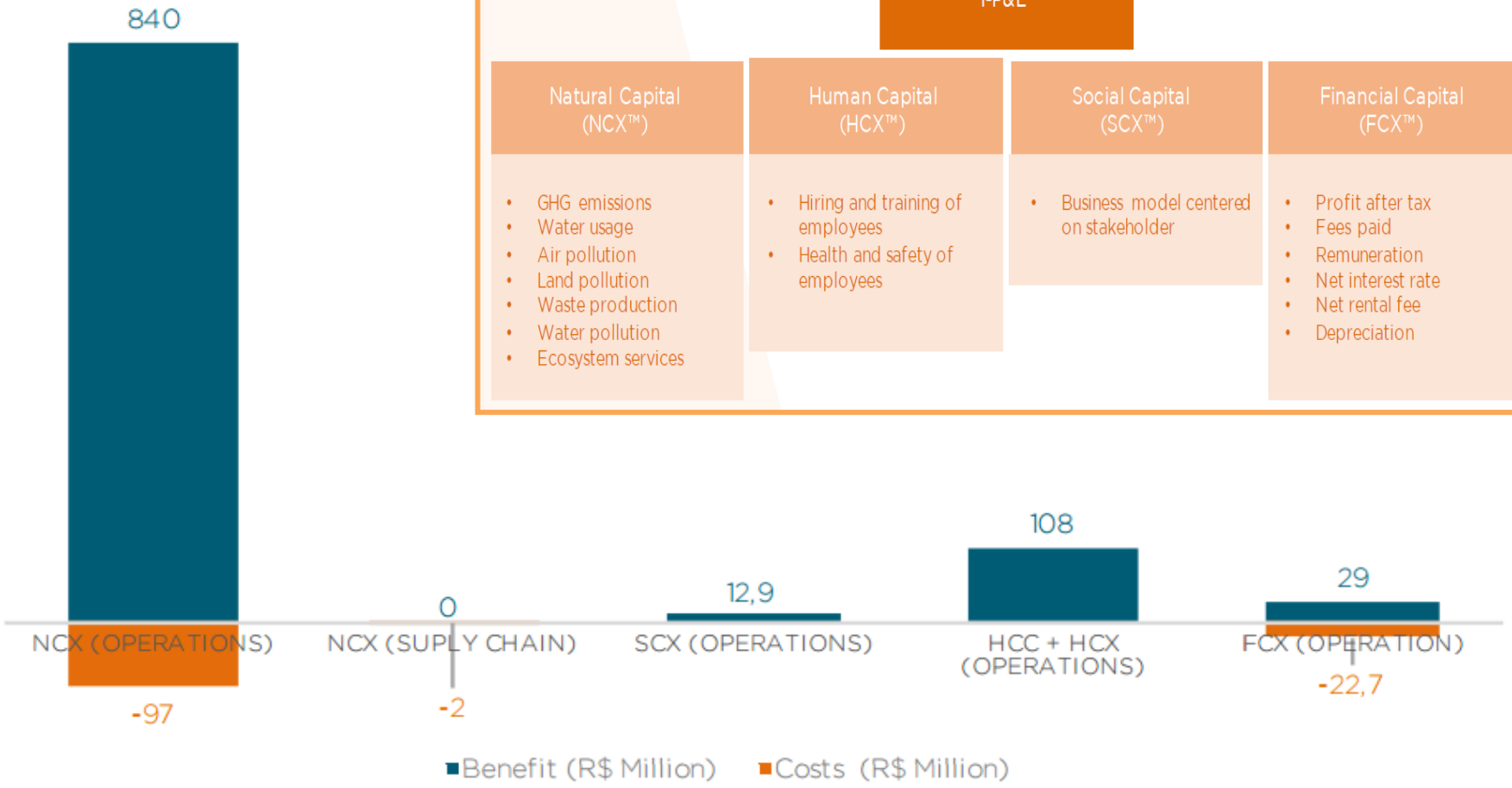
AMATA <IP&L™> 2014

Positive and negative externalities of AMATA in 2014

Approach used to evaluate each capital was:

I-P&L

Natural Capital (NCX™)	Human Capital (HCX™)	Social Capital (SCX™)	Financial Capital (FCX™)
• GHG emissions • Water usage • Air pollution • Land pollution • Waste production • Water pollution • Ecosystem services	• Hiring and training of employees • Health and safety of employees	• Business model centered on stakeholder	• Profit after tax • Fees paid • Remuneration • Net interest rate • Net rental fee • Depreciation



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(I)NDCs and Nature

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Action on Climate Change
The Process

- In the build up to COP21, each party was invited to submit their Intended Nationally Determined Contributions (**INDCs**)
- INDCs detail what the country is able and willing to commit to, keeping its national priorities, circumstances and domestic capabilities in view
- The **Paris Agreement** was arrived at through consensus amongst 195 parties to the UNFCCC at COP21
- Between April 2016 and 2017, parties may ratify the treaty and provide their updated Nationally Determined Contributions (**NDCs**)
- Once at least 55 parties accounting for at least 55% of total GHG emissions ratify the treaty, it becomes legally binding

UNEP

United Nations
Framework Convention on
Climate Change

PARIS2015
CONFÉRENCE DES NATIONS UNIES
SUR LES CHANGEMENTS CLIMATIQUES
COP21·CMP11

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Top 10 Emitters' INDC Pledges

Rank	Country	Reduction Measure	Base Year	Target Year	Unit	Target
1	China	Emissions Intensity	2005	2030	CO2	60-65%
2	USA	Emissions	2005	2025	GHG	26-28%
3	EU	Emissions	1990	2030	GHG	40%
4	India	Emissions Intensity	2005	2030	GHG	33-35%
5	Russia	Emissions	1990	2030	GHG	70-75%
6	Japan	Emissions	2013	2030	GHG	26%
7	**Brazil**	**Emissions**	**2005**	**2030**	**GHG**	**43%**
8	Indonesia	Emissions	2010	2030	GHG	26% (Unilaterally) 41% (Multilaterally)
9	Mexico	Emissions Intensity	2013	2030	GHG	40%
10	Iran	Emissions	2010	2030	GHG	4% (Unconditional) 8% (With support)

Source: Country INDCs | WRI (2012)

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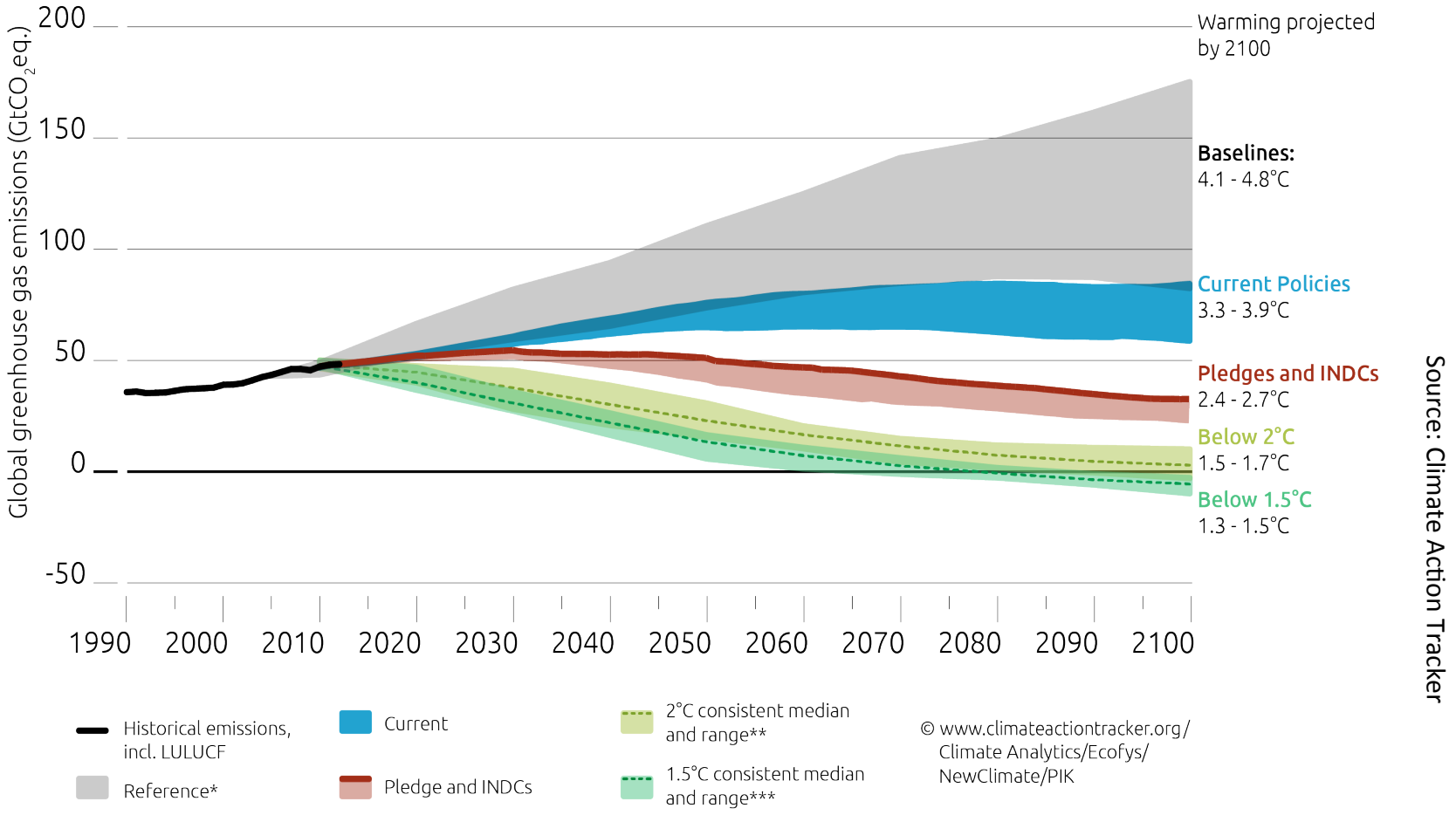
Possible scenarios with INDCs



- ❑ **With current policies average temperature to rise 3.3º – 3.9ºC by 2100.**
- ❑ **Even with INDCs & pledges, we will hit 2.4º – 2.7ºC by 2100.**

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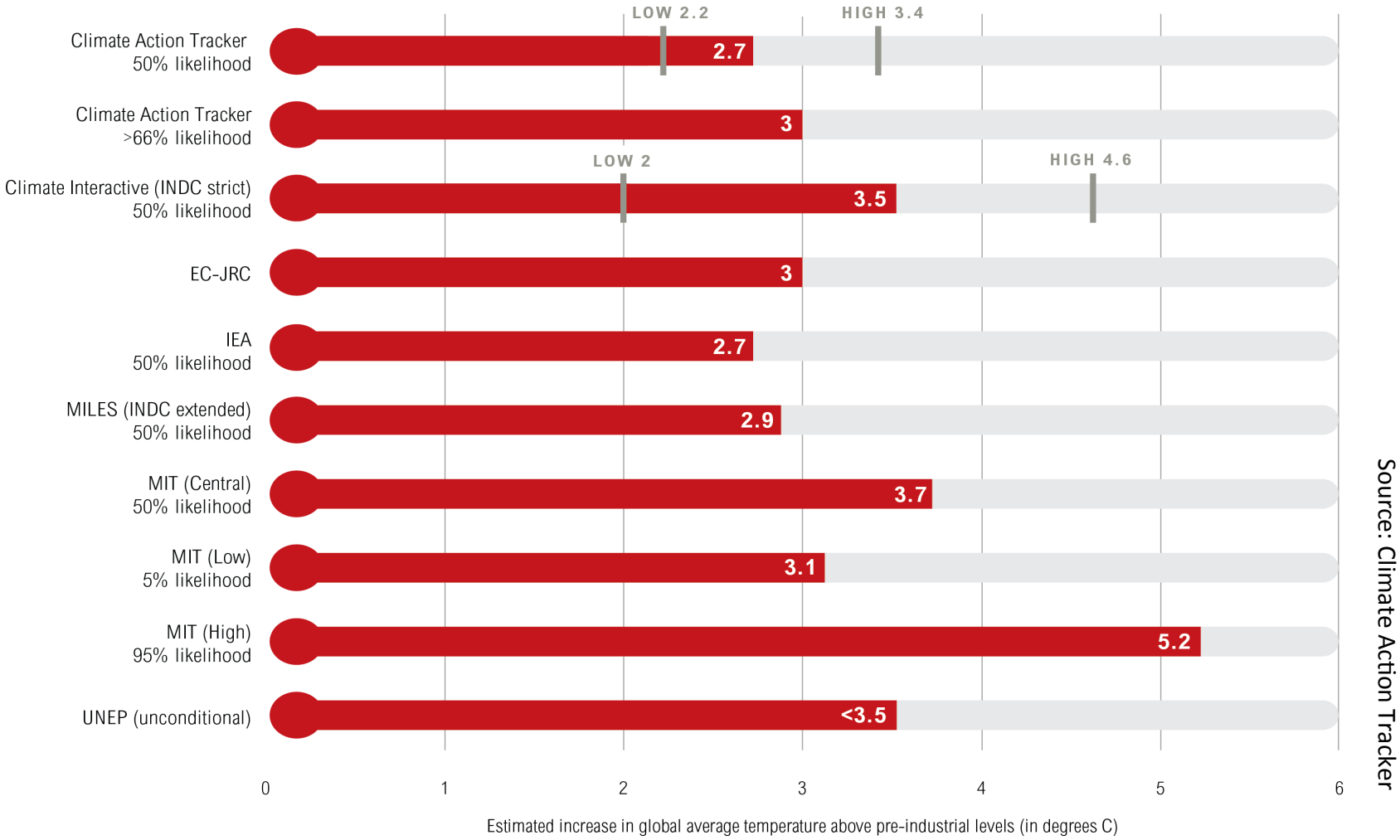
Are the INDCs enough?

Estimates for Global Temperature Rise with INDCs



Source: Climate Action Tracker

Brazil's INDCs at COP21

(Base Year: 2005)	2025	2030
GHG Emissions	↓ 37%	↓ 43% (indicative)
Emissions Intensity	↓ 66%	↓ 75% (indicative)

Source: Brazil's INDC

Share of:	2014	2030 Target
Renewables in the energy mix[1]	39. 4%	45%
Renewables in the energy mix, excluding hydro[1]	27.6%	28-33%
Renewables in electricity, excluding hydro[1]	9.4%	At least 23%
Sustainable biofuel in the energy mix[2]	5.6%	18%

[1] Balanço Energético Nacional

[2] IDDRI (2015)

Agriculture & Forestry Measures

- Zero illegal deforestation by 2030
- Restoration and reforestation of 12 million hectares of forests by 2030
- Restoration of 15 million ha of degraded pasturelands by 2030
- Enhancing 5 million ha of integrated cropland-livestock-forestry systems by 2030

Source: Brazil's INDC

Importance of Agriculture and Forestry

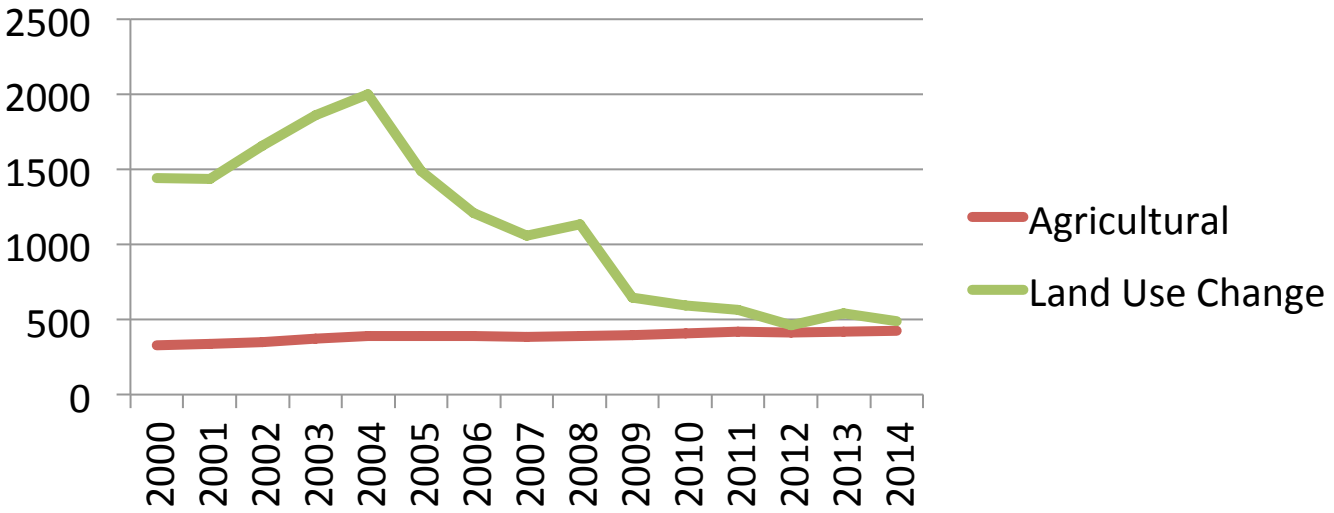
Share of agriculture and forestry emissions in total emissions (2012)

Sector	World	Brazil
Agriculture	11%	24%
Land-Use Change and Forestry	6%	44%

Source: goo.gl/GQvn9R

Brazil's agriculture and forestry emissions trend – 2000 to 2014 (MtCO2e)

Decrease of 66% in emission from Land Use Change from 2000 to 2014



Source: goo.gl/x7QBtd

Tropical Forest Mitigation of CO_2 : Ecological & Economic Rationale …

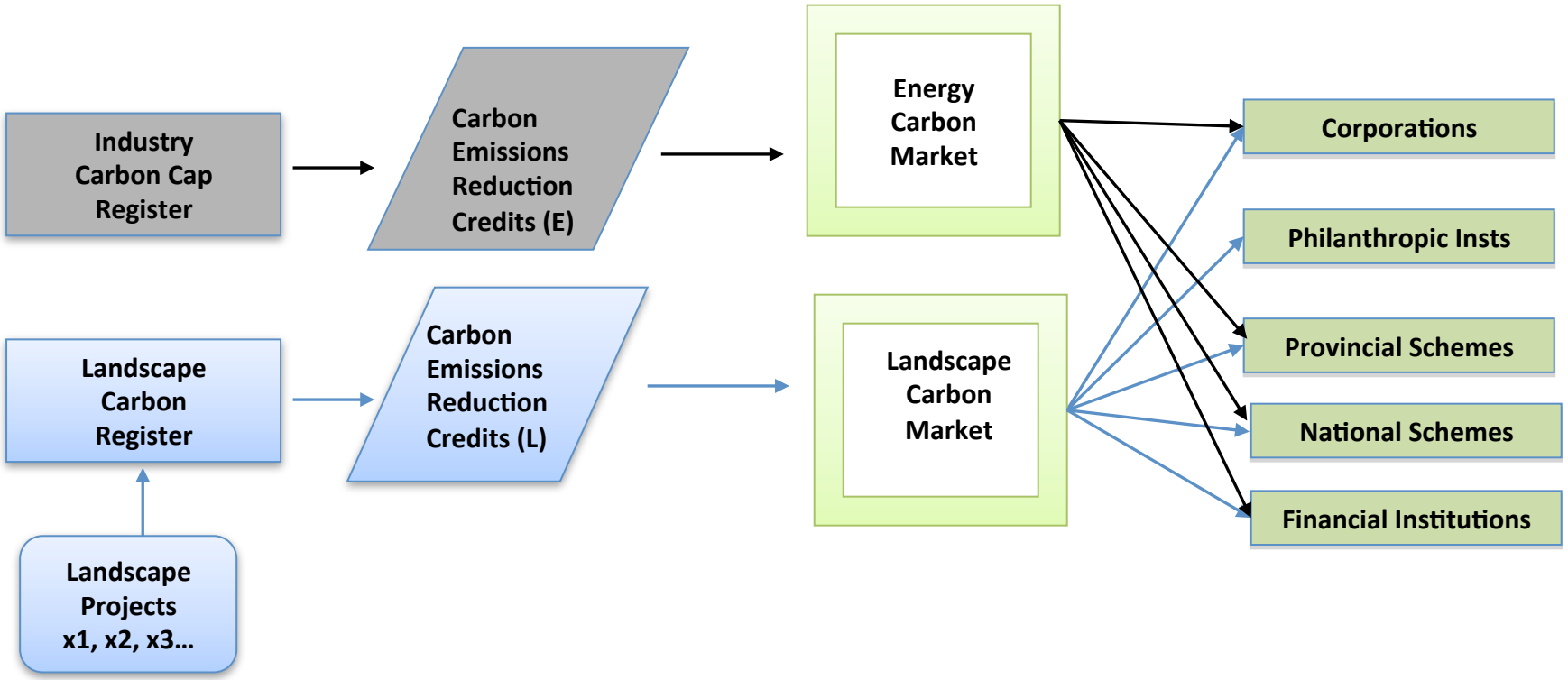
1. Tropical forests store a fourth of terrestrial carbon
   - 547 Gigatonnes (Gt) out 2,052 Gt **(Trumper et al., 2009)**

2. Tropical forests capture a sixth of CO_2 emitted
   - up to 4.8 Gt CO_2 annually **(Lewis & White, 2009)**

   (total CO_2 emissions p.a. ~32Gt)

3. Stopping deforestation holds an excellent cost-benefit ratio
   - Halving deforestation generates net benefits of about $ 3.7 trillion (NPV) including only the avoided damage costs of climate change **(Eliasch Review, 2008)**

A National Market for Tropical Forest Carbon, including Biodiversity & Ecosystems benefits



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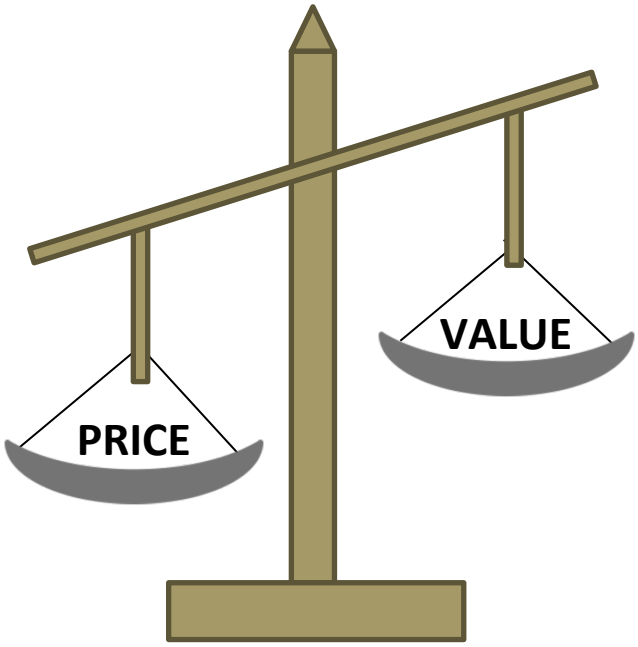
Natural Capital and Nature

Natural Capital and Nature

Natural capital is *"an economic metaphor for the limited stocks of physical and biological resources found on earth, and of the limited capacity of ecosystems to provide ecosystem services"*[1].

- *"**Value ("Valor")** is the worth to you of what you receive."*
  - "Valuation is a human institution" (TEEB)
- *A **price ("preço")** is what is paid for the value you receive*
  - *Markets* provide prices for *private* goods and services, not *public* goods
  - *Nature* provides its valuable *public goods and services* for free, so there is *no price*!



[1] TEEB Synthesis Report (2010)

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Thank You!

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